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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,955	12/03/2003	Carl Hensman		4381

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SUITE 1020  
2033 6TH AVE  
SEATTLE, WA 98121

EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/726,955	<b>Applicant(s)</b> HENSMAN ET AL.	
	<b>Examiner</b> Ivars C. Cintins	<b>Art Unit</b> 1724	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/22/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 5 and 9-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The terms: “may comprise” (claims 2, 3, 11 and 12; line 2), “comprise of the metals ...” (claims 5 and 10; line 2), “any other derived species ...” (claims 5 and 10, lines 3-4), and “ption” (claim 9, line 2) are vague, and indefinite as to the limitations intended. Claims 13-17 depend from indefinite claim 9, and are therefore also indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Sasowsky et al. (U.S. Patent Application Publication No. 2003/0146163). The reference discloses removing toxic metals (see paragraph 0024, lines 12-14) from an aqueous solution, such as groundwater (paragraph 0024, line 17), by contacting this solution with volcanic rock (see paragraph 0024, lines 8-10) in the recited manner (see paragraph 0021, lines 2-4); and this is all that is required by claims 1-3 and 5-8.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasowsky et al. in view of Cohen (U.S. Patent No. 3,996,158). Sasowsky et al. discloses the claimed invention with the exception of the source of the volcanic rock. Cohen teaches that volcanic rock of the type recited can be obtained from an ash flow tuff (see col. 2, lines 48-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain the volcanic rock material of Sasowsky et al. from an ash flow tuff, as required by claim 4, in view of the teaching by Cohen that this type of material is present in such an ash flow tuff.

Claims 9-12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasowsky et al., as applied above, and further in view of Gillham (U.S. Patent No. 5,534,154). Sasowsky et al. discloses the claimed invention with the exception of the recited additives to the volcanic rock. Gillham teaches purifying contaminated groundwater by treating it with a mixture of activated carbon, iron filings and sand (see col. 3, lines 53-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the activated carbon and iron of Gillham into the treatment mixture of Sasowsky et al., in order to provide additional water purification capability for the primary reference system.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasowsky et al. in view of Gillham as applied above, and further in view of Cohen. The modified primary reference discloses the claimed invention with the exception of the source of the volcanic rock. Cohen teaches that volcanic rock of the type recited can be obtained from an ash flow tuff (col. 2, lines 48-61); and it would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain the volcanic rock material of modified primary reference from an


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ash flow tuff, in view of the teaching by Cohen that this type of material is present in such an ash flow tuff.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ivars C. Cintins  
Primary Examiner  
Art Unit 1724

I. Cintins  
February 25, 2005